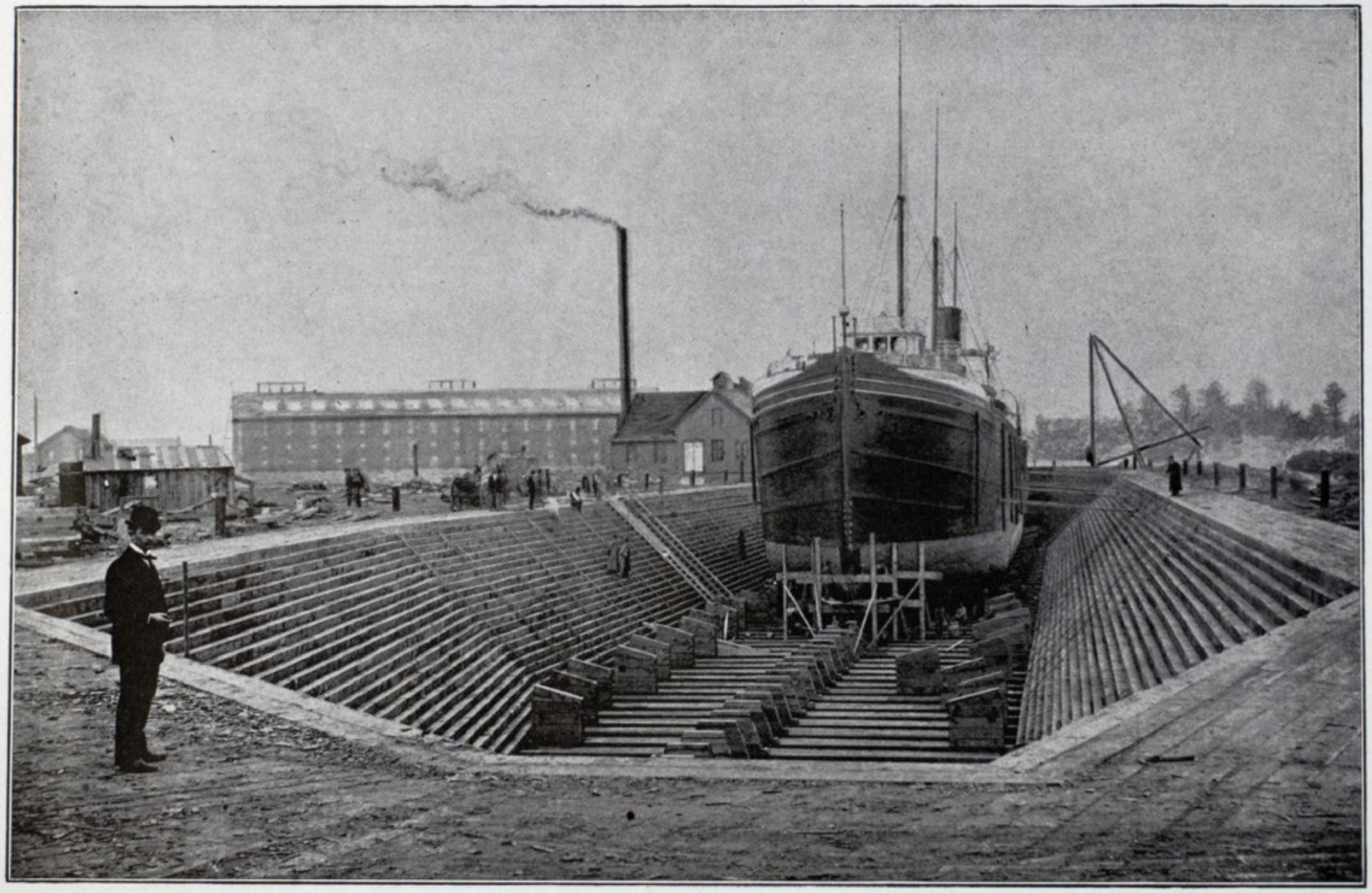

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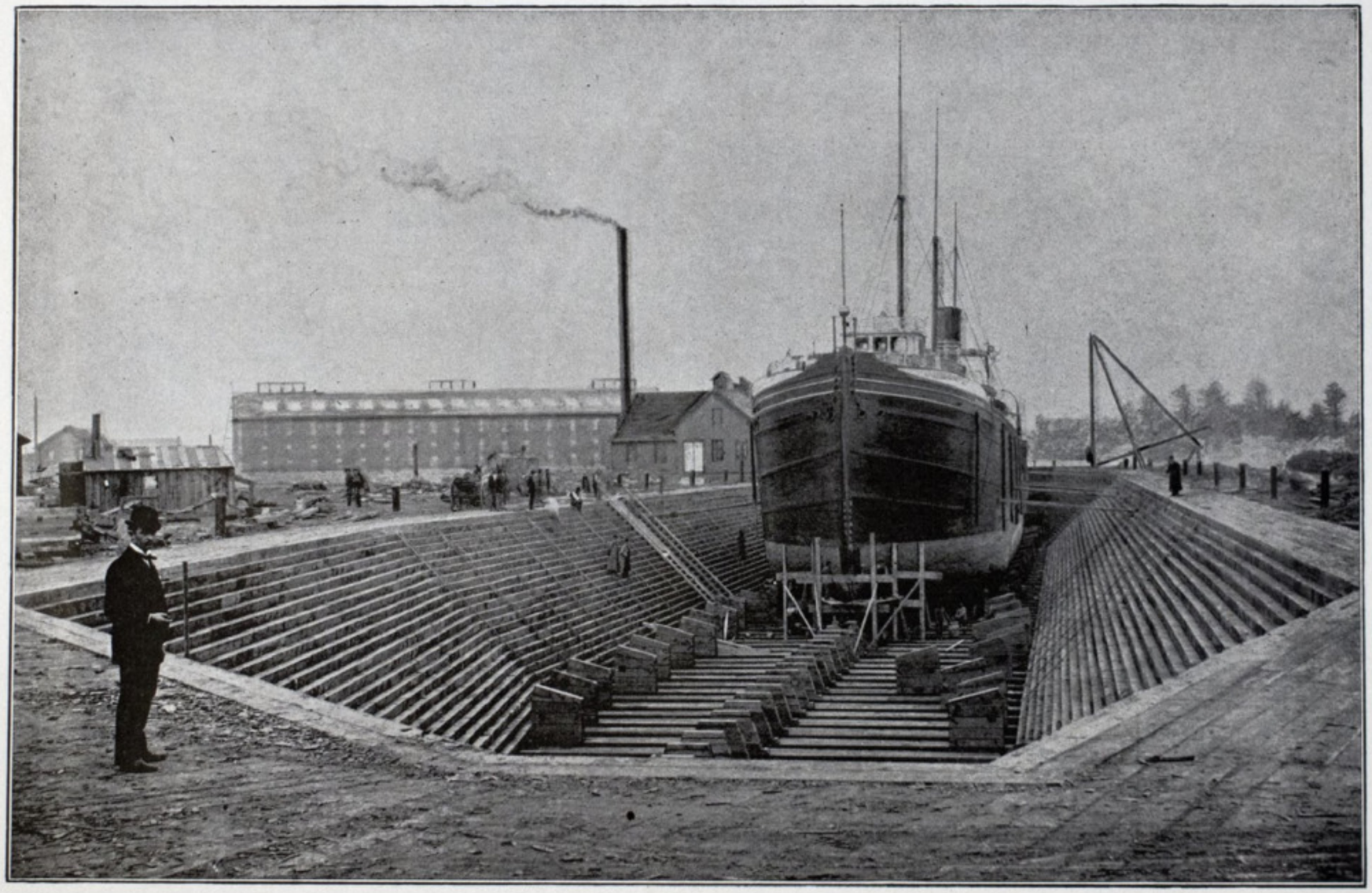
THE LARGEST DRY DOCK ON THE GREAT LAKES.

AMERICAN STEEL BARGE CO., WEST SUPERIOR, WIS.



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THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

ESTABLISHED 1878.

VOL. XV. CLEVELAND, OHIO, SEPTEMBER 29, 1892. NO. 40

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers and improve the character of the service rendered to the public.

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Vice-Presidents:

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W. S. BRAINARD, -	Toledo.	F. J FIRTH, - -	Erie
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Treasurer: GEO. P. MCKAY, - - Cleveland.
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James Davidson, -	Bay City.	H. G. Dalton. - -	Cleveland.
Charles A. Eddy. -	Bay City.	Harvey H. Brown, -	Cleveland.
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F, W. Gilchrist, -	Alpena.	B. L. Pennington, -	Cleveland.
J. C. Gilchrist, -	Vermillion.	Henry A. Hawgood, -	Cleveland.
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Jesse Spaulding, -	Chicago.	S. D. Caldwell, - -	Buffalo.
J. S. Dunham, - -	Chicago.	Peter P Miller, -	Buffalo.
John Keith, - - -	Chicago.	E. T. Evans, - -	Buffalo.
Joseph Au-trian -	Chicago.	James Ash, -	Buffalo.
David Vance -	Milwaukee.	W. Bullard, - -	Buffalo.
R P. Fitzgerald, -	Milwaukee.	J. J. H Brown, -	Buffalo.
W. Livingstone Jr, -	Detroit	W P Henry, - -	Buffalo.
James Millen - -	Detroit	John Gordon, - -	Buffalo.
David Carter, - -	Detroit.	W. S. Brainard, -	Toledo.
E M. Peck, -	Detroit.	L. S. Sullivan, - -	Toledo.
D. C. Whitney, - -	Detroit.	A. W Colton, - -	Toledo.
H S Hodge. - -	Detroit.		

FINANCE COMMITTEE OF THE LAKE CARRIERS ASSOCIATION.

The semi-monthly session of the finance committee of the Lake Carriers' Association held on Monday was a short one, little business requiring attention. Secretary McKay was instructed to send the following letter to the Lighthouse Board:

"We are informed that the new light house at Squaw Island, Lake Michigan, is finished all ready to light, but some difficulty exists about funds for putting it in operation at once. We call your attention to the great need for this light. For the coming two months of fall navigation the exhibition of this light will be of the greatest aid as the most important and useful guide through the northern passage where disasters have occurred nearly every fall, which might have been avoided with such a light in operation. We respectfully urge and request that if any plan or arrangement can be devised, that this light be put in operation at once."

A communication was received by President M. A. Bradley from Col. Jared A. Smith, Corps of Engineers, U. S. A., in charge of the 10th Lighthouse district, written at the request of the Lighthouse Board, stated that the main light at Cleveland is not necessary as a coast light, for the reason that vessels passing east or west can see the location of Cleveland more distinctly by the lights of the city than from the lighthouse, and that it does not serve any purpose in guiding vessels into the harbor, as there are lights for that purpose. The communication also stated that the main light at Erie has lost its usefulness since the establishment of the light on Presquile as a coast light. Col. Smith asked the committee to express their opinion on the subject.

The finance committee unanimously recommended that the Cleveland light be discontinued. They declined to make any recommendation as to the Erie light, but left the matter with the Buffalo vessel owners to pass upon. The Cleveland light has for years been superfluous. When the electric masts are lighted they can be seen at a distance far beyond the government light, and the lights on the piers and crib, and at the end of the breakwater furnish all the ranges necessary to get into the river safely. A very substantial brick cottage is located on the property, which has a large frontage, and if well sold, ought to net a good sum for the Lighthouse Board.

CONTRACTS FOR NEW LAKE TONNAGE.

Abraham Smith at Algonac has commenced work on a schooner for the Comstocks of Alpena. The new vessel will be 170 feet keel, 34 feet beam, and 11 feet depth of hold. She is designed specially for the lumber trade.

Messrs. W. A. Hawgood, C. C. Canfield, and others, of Cleveland, O., have just placed an order with the F. W. Wheeler Company, of West Bay City, for the construction of a large modern steamer of the following dimensions: Length over all, 315 feet; keel, 291 feet; beam, 41 feet; depth of hold, 24 feet. She will be propelled by a triple expansion engine with two 12x12 feet Scotch type boilers, and will be ready for service April 1. She is about the size of the steamer C. F. Bielman, recently built at the Wheeler yard, and is larger than the William F. Sauber and the George F. Williams. She is expected to carry 2,600 tons of ore on the usual limited draft. The engines for the new boat will be built at Bay City, and the boilers at Saginaw.

The North Shore Navigation Co. have awarded a contract to Capt. John Simpson, of Owen Sound, Ont., for the building of a fine new steamer for the "Soo" route. She will be a propeller over 200 feet in length, with special qualities for making fast time, elegant appointments throughout, and will cost, it is estimated, about $100,000. Her engines will probably be built by the Doty Engine Co., of Toronto. Capt. Bassett, of the North Shore company's steamer City of Midland, has resigned from that steamer, and will superintend the building of the new boat. Capt. F. X. LaFrance, formerly of the Carmona, and more recently of the Garden City, has been appointed to the command of the Midland, vice Capt. Bassett.

The Hamilton Bridge and Tool Company, Hamilton, Ont., has signed a contract to build a steel pleasure steamer for the Toronto and Niagara Navigation Company. The work will be done at Robertson's shipyard and the steamer must be in the water by April, 1893. She will be a side-wheeler, 311 feet long by 68 feet beam, and will have five boilers 21 feet by 11 feet in diameter, and a guaranteed speed of over 20 miles an hour. The steamer will be elegantly fitted up and will be licensed to carry 2,400 people on the route from Toronto to Lewiston and Queenston, connecting with the new electric railway. All the work will be done at Hamilton, except the engines, which will be built by a New York firm. The cost will be $250,000.

A REVISION OF THE ST. MARY'S FALLS CANAL TOLLS.

Assistant Secretary Spaulding, of the Treasury Department, has issued the following circular:

"Tolls as provided by the department's circular No. 145 of 1892 will be collected in the case of vessels passing through St Mary's canal consigned to American ports, but whose manifests state that the cargo is to be exported to Canada, either to be retained there or for export to a foreign country other than the United States. When the manifest shows that the final destination of the cargo is the United States or a foreign place other than Canada via the United States, whether the merchandise be subject to shippers' orders or otherwise, the collector will issue landing certificate accordingly unless upon investigation he shall find that the manifest was made out with intent to defraud the United States or to conceal the true final destination, and that the tolls were properly payable, in which case he will withhold his certificate and take measures for the collection of the tolls due."

TO SURVEY AND CLASS LAKE TONNAGE.

The Record of American and Foreign Shipping has had an agent on the lakes for the past two years, during which time F. W. Wheeler & Co., of West Bay City, Mich., has had three steamers built under their rules and inspection and another one is now in course of construction by the same builder. The wooden steamer James J. Hill, built at Morley's yard, was also built in accordance with the requirements of the "Record" rules.

It is now learned that this Association is disposed to make their rules conform to all the reasonable requirements of lake commerce, and as their classification is endorsed by the United States government as well as the Boards of Underwriters of New York, Boston and San Francisco the best results ought to follow from a "Record" rating.

PUNCHING EXPERIMENTS ON SOFT STEEL.

At the September meeting of the Civil Engineers Club of Cleveland, Prof. C. H. Benjamin, of Case School of Applied Science, read a paper on "Some Experiments on the Effect of Punching on Soft Steel." The experiments described were made at the mechanical laboratory of Case School of Applied Science, under the direction of Charles S. Howe, and had for their objects, first the determination of the ultimate resistance to shearing of soft steel plate for different forms of punch; second, the determination of the effect of the punching on the elastic limit and ultimate tensile strength of the plate in the various cases.

In every test the material was Otis steel boiler plate one quarter inch thick and stamped 60,000 lb. tensile strength, the pieces all being cut from the same plate. The experiments showed that the average resistance to punching with the common forms of punch was 50,000 lb. per square inch, while with the spiral punch it was only 38,000 lb. Also that punching a plate with the ordinary form weakened it 7½ per cent., while the use of the spiral punch only weakened it 3 per cent. A considerable change in clearance affected the results but slightly, but good or bad centering of punch and die was very noticeable in its effects.

NAVIGATING THE ATLANTIC IN A SAIL BOAT.

The intrepid Captain Andrews, now ferrying across the North Atlantic in his 14½ foot boat, was spoken recently by the German ship Adolf and if all is well he should be now in the locality of the Azores or Western Islands. During his two hours' conversation with the officers of the Adolf he appeared to be in a cheerful mood and told interesting stories of the manner in which he amused himself throughout the long and dreary passage. For weeks he had not spoken to any one and sometimes would argue to himself in order to make sure he had not lost the use of his tongue. During the daytime he said he did nearly all his sleeping and remained awake throughout the night. He read and studied a good deal and never felt lonesome till nightfall. He said he had met with several misfortunes, the most serious one being the breaking of his lamp. Consequently he was in utter darkness throughout the nights, and on several occasions came near being run down by the fast line steamships.

The experience while foolhardy, is of paramount importance to the sailing community as demonstrating the efficiences of a small boat to live in hard weather when skillfully handled, and will induce a vast deal more confidence in the small boat than has hitherto obtained, but at all times the big boat is the best.

NEWS AROUND THE LAKES.

CLEVELAND, O.

The directors of the new Cleveland & Buffalo Transit Company have elected the following officers: M. A. Bradley, president; George W. Gardner, vice-president; R. C. Moodey, treasurer; T. F. Newman, secretary and general manager. A thoroughly efficient representative will be appointed to manage the Buffalo end of the line.

Special services in memory of William H. Seaman, the chief engineer of the ill-fated steamer Western Reserve, was held on Sunday afternoon, at 3 o'clock, in the Franklin Avenue Congregational Church. The members of Bigelow Lodge, No. 243, F. and A. M., of which the deceased was a member, attended in a body and participated in the exercises.

F. W. Wheeler, of West Bay City, Mich., visited the city on Tuesday, and held a consultation with the several local vessel owners, for whom he is building new tonnage.

Mr. E. Platt Stratton, chief engineer surveyor for the "Record of American and Foreign Shipping" issued by the American Shipmasters' Association, of New York, spent Tuesday at this port en route for the west. It is understood that the several last new contracts will be built under inspection and survey for classification in the "Record of American and Foreign Shipping."

Mr. George E. Hartnell, of this city, has returned home after successfully completing the construction of the large new dry dock at West Superior, Wis.

Capt. C. E. Benham and W. J. Miller held a preliminary survey on the Corrigan line steamer Neff, recently sunk in the outer harbor at this port. Certain work was ordered done subject to a final survey to assess the amount of repairs necessary to put the steamer in good condition again.

Considerable sympathy is expressed for the loss which Mr. Joseph R. Oldham has recently sustained in the death of two of his youngest children through diphtheria.

Local vessel men staunchly support Col. Wm. Ludlow, Corps of Engineers, U. S. A., in his views of the the method of lighting the St. Mary's River, and rather than allow this qualified officer to rest under a suspension of his light-house duties, the matter in dispute will be forced to a congressional committee. It is openly proclaimed that Col. Ludlow has a Judas-like friend in Washington who endeavored to bring about an unpleasantness the end of which, is not yet.

The capital stock of the Cleveland-Buffalo Transit Co., has been increased from $150,000 to $375,000.

The recent death of Chas. Treiber, Jr., a well-known engineer of this port, occurred at his home on the West Side. The deceased was a brother-in-law of Capt. E. Dahlke, and had been an engineer with him for the past fifteen years.

The Thew-automatic steam shovel, specially designed for trimming and discharging iron ore, has been placed on board of the steamer Alexander Nimick, trading between Ashland and Fairport. This invention is now controlled by a wealthy syndicate, and there is little doubt but that ore trimming and handling charges will be greatly reduced through the introduction of this compact automaton for trimming and discharging bulk cargoes.

A dispatch was received here on Wednesday from Deer Park, Mich., stating that the bodies of two more of the crew of the Western Reserve had been washed ashore. One was thought to be that of chief engineer William Seamen, whose bereaved family live at 302 Clinton street. The other body was that of a seaman, and was unidentified.

Charles R. Jones has entered a suit in equity in the common pleas court to solicit the aid of the court in adjusting matters between him and his former partner in the vessel brokerage business, F. J. Drake. The firm commenced business this spring and dissolved partnership in August. Mr. Drake, who kept the books, held that his partner was due the firm $400. Since the dissolution the books have been carefully audited, and now Mr. Jones sues for a return of $250.

CHICAGO, ILLS.

Special Correspondence to The Marine Record.

The steamer Seguin, of Owen Sound, arrived here Monday morning with 850,000 feet of lumber from Little Current, Manitoulin Island. When going off the lumber market in tow of the tug Union, in turning around to go down the river, she got the main boom of the schooner Anne O'Hansen, laying ahead of her, through one of the windows of her cabin aft, and it also broke a portion of her hurricane deck.

The whaler Progress was sunk Saturday afternoon at her moorings just east of State street bridge on the South Side. The tug Hay, towing a sand scow, when trying to get through the south draw of the bridge, towed the sand scow against the Progress and knocked a hole in her port side, causing her to sink. The Progress has been laying at a dock close to State street bridge, on exhibition, for several weeks, with her yards squared across the river, and her davits and boats out on the port sides, obstructing navigation, where no vessel belonging to this or any port would have been allowed to lay only long enough to load or unload. The Dunham Towing and Wrecking Co. had a diver at work on the Progress Sunday and patched up the hole in her side, and pumped her out, and towed her to Miller's shipyard for repairs. It is to be hoped that the syndicate who have her on exhibition will find a safer place to moor her where she will not be an obstruction to navigation.

At Miller Brothers shipyard the barque Progress was in dock for repairs; the schooner Flying Cloud for repairs to her bottom and calking; the schooner South-West to have a leak stopped; the tugs Kitty O'Neil and Welcome for repairs.

The steamer Mary Mills had her stern damaged by collision with the steamer Thomas H. Smith, when coming down the north branch of the Chicago river last Thursday evening. The Mills ran into Manitowoc Friday afternoon and had repairs made to her stern at Burger & Burger's shipyard.

The steamer S. S. Wilhelm and consorts Nirvana and William Crosswaithe, with 2,130,000 feet of lumber were on the lumber market last week for two or three days awaiting sale of their cargoes.

Two cars of the specially prepared coke for use on tugs arrived here this week, and some of it was tried on some of the Chicago Tug Line Co.'s tugs, and was found to be a success as a smoke preventative. It will cost about 50 per cent. more than soft coal, and the tugs will have to coal, or rather coke up, oftener. Even then it will be ahead of hard coal, which will cost nearly 100 per cent. more than soft coal. WILLIAMS.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

At the Milwaukee Dry Dock Co.'s the barge Met-a-Comet was in dock for re-calking to the light water mark. The steamer Arcadia was on dock for a new rudder. The schooner Wanetee received a new center board box and re-calking. The Milwaukee Dry Dock Co. have docked 28 vessels during the past month.

The steamer George Dunbar received a new crank shaft at the Sheriff Manufacturing Co.'s. She was towed in here disabled by the tug Sheboygan.

The Independent Tug Line are again occupying the offices they formerly occupied, which have received a thorough rebuild.

Joy Bros. & Co., shipbuilders, are removing into their new store at 205 East Water street, where they have built a fine new six story building. WILLIAMS.

TRAFFIC AT THE HEAD OF THE LAKES.

Special Correspondence to The Marine Record.

DULUTH, MINN.—It is exactly five months since navigation opened and the harbor master has given out some interesting figures of the tonnage of the head of lake navigation for that time. There have been 2,976 arrivals and departures in the season to date, an average of 600 a month, or 20 vessels daily. The average tonnage of these vessels has been almost exactly 2,000 tons carrying capacity, making a tonnage for the ports of Duluth and Superior for the five months of 5,952,100 tons. The total freight tonnage of the two cities for the entire eight months of navigation of 1891, was 5,332,494 tons, while that of Chicago was 10,150,052 tons. With a total carrying tonnage of nearly 6,000,000 tons already, and over two months yet to hear from, the freight tonnage of the present season will probably exceed that of last year by about 25 per cent. The tonnage of Chicago will not increase in any such ratio. The next two months will be far heavier in marine business than the last two, for the business in wheat is increasing very fast.

As intimated last week the Neoshoto was considerably damaged, and a survey of the vessel as she lies in dock shows her bows are smashed in for a hundred feet, from five to ten feet either side the keel. Several of the forward frames are also broken. The Steel Barge Company was somewhat unprepared for a vessel, especially a wooden one, but timber and carpenters were secured and put to work. It will likely be three weeks before she is out.

By the time this letter is printed ore shipments from the Vermillion mines will have reached the excellent total of 975,000 gross tons, or about the total of all last year's. This with two months of navigation yet to hear from. Last week's shipments were 45,000 tons. October is expected to see 150,000 tons sent forward from the Duluth & Iron Range docks. Ore rates have stiffened up during the past week and are now $1.20 to Lake Erie and $1.15 to South Chicago. These are the highest figures of the season, and doubtless due to a better demand for tonnage from wheat shippers, to an increased consumption of ore and larger forwarding of coal. Wheat is now moving briskly out of Duluth at an advanced rate, 3½c. being offered for room to Buffalo. The shipments of the past week were not so large as was expected, the increase in stocks in store being 300,000 bushels. There is almost no foreign and little eastern demand. In store now are 2,227,300 bushels wheat and a little flax and barley. All the oats and corn, 35,000 bushels of each, were shipped out last week. A year ago the stock here was 1,202,900 bushels. Of the present stocks 680,000 bushels are on the Superior side of the bay, and 1,550,000 bushels on the Duluth side. Receipts are averaging about 200,000 bushels daily.

Bids for channel improvements in the upper bay and river, as far as Fond-du-Lac, the available funds for which aggregate $62,500, were opened Thursday. There were three bids, that of Williams, Daugherty & Upham, of Duluth, being the least, 21 and 15 cents a yard. The day before bids were opened for the work on the Superior side, for which $70,000 is available. Capt. Barker bid 14½ cents; Williams, Daugherty & Upham, 14¼; and Chicago Dredging & Dock Co., 20 cents. On both contracts work will begin at once.

Capt. Fiske, engineer in charge of Lake Superior harbors, stationed here, leaves for his new post at Willett's Point, N. Y., in a day or two, his successor having arrived. The latter reached town from Willett's Point today.

SHIPBUILDING AT WEST BAY CITY, MICH.

Special Correspondence to The Marine Record.

WEST BAY CITY, MICH.—The keel for another schooner, 230 feet long, and a duplicate of the three now on the stocks, has just been laid at Davidson's yard. She will be built of wood, and will cost about $60,000.

The propeller Minnie M., owned by the Delta Transportation Co., has been sold to George T. Arnold, of Mackinac, who will put the boat back on her old route between Cheboygan and the Soo. Capt. J. B. Mondor, of the latter place, will take charge of her.

Lightship No. 53, and the last of the four built by Wheeler & Co. for "Uncle Sam," left the river Saturday for Charleston, S. C., where she will be stationed at the Frying Pan Shoals. Capt. William Forbes, of Port Huron, is in command.

The steel tug W. G. Wilmot, owned by Wilmot & Co., of New Orleans, was launched from Wheeler's yard at noon of Thursday last. She will be a very powerful tug, her engine being triple expansion, 16, 24, and 40 inches in diameter, with a 28 inch stroke. She is fitted with steam steering gear, and all of the latest appliance for facilitating the work for which she was built. It is expected she will be ready to leave this port for New Orleans in about two weeks.

That work in the shipyards of this city will be brisk during the coming winter again receives emphasis in the fact that F. W. Wheeler & Co. have closed another contract, this time for a wooden vessel to be built for Bay City and Cleveland parties. The new boat will be 290 feet keel; 308 feet over all, 41 feet beam, and 23 feet depth of hold. Two large Scotch type boilers 13 feet in diameter will supply the necessary power for the engines, which will be triple expansion, 20, 32½, and 55 inches in diameter, with a 42 inch stroke. The engines will be built at Wheeler & Co.'s shops. She will be a duplicate of the C. F. Bielman. J. P. R.

MANITOWOC MARINE NOTES.

Special Correspondence to the Marine Record.

MANITOWOC, WIS.—At Burger & Burger's shipyard, the steam barge Pewaukee was in dock for new deck beams and deck aft, fixing stern bearings and bottom calking. The steamer Ohio for re-calking, the steamer Fayette for some new plank in botton and calking, the steamer Menominee for a new stern bearing, the steamer Fanny C. Hart received some re-calking and steel plating, the schooner Genoa had her bottom calked, the schooner A. J. Rogers, received some repairs and had her top sides calked.

The Manitowoc Steam Boiler Works are building a steel boiler 7 feet 4 inches by 12 feet to be allowed 130 pounds steam pressure, also a Scotch type boiler 6 by 8 for a tug building at Sheboygan.

Your correspondent visited Capt. H. C. Albrecht of steamer T. S. Christie, and was sorry to find him sick in bed, and hopes soon to report him well again.

The steam barge Mary Mills received part new skin at Burger & Burger's Shipyard, Friday afternoon.

Paul Oleson, shipchandler, intends shortly to remove on 8th Street near the bridge, where he will carry a full supply of ship chandlers stores. The new location will be much better for his business and he hopes his old friends will give him a call. WILLIAMS.

THE LIGHT-HOUSE BOARD AND COL. LUDLOW.

The Ludlow end of the controversy with the Light-house Board regarding the placing of efficient lights in the St. Mary's River is in the ascendant and the Colonel is receiving the energetic support of influential friends and the vessel-owning community on the lakes.

Acting Secretary of War, Gen. Grant is quoted in a Washington dispatch as saying: "I should be delighted to comply with a request of Secretary Foster to have Col. Ludlow restored to duty on the great lakes. He was right in his construction of the law, and he did everything possible to induce the Light-house Board to see the necessity of acting under the law as liberally construed by him. He wrote letters, sent telegrams and diligently endeavored to induce the Board to permit him to establish additional lights in St. Mary's river, but the board was obstinate in its attitude and Col. Ludlow, who had been right from the beginning, committed an error when he wrote his last letter, which was equivalent to insubordination. He was relieved of duty, upon the request of Secretary Foster. Now that the Secretary of the Treasury has investigated the matter and sees that Col. Ludlow was right, I should be pleased to respond to a request for his restoration to duty." When Secretary Foster was informed of this friendly disposition on the part of the Acting Secretary of War, he said: "I am also disposed to be friendly to Col. Ludlow, but the question is now raised as to whether it would be proper and for the welfare of the army to restore to duty an officer who has disobeyed orders. The matter is complicated somewhat and I am going to take a couple of days to consider the question."

It is probable that Secretary Foster does not know that he is standing upon a volcano. The majority of the Light-house Board are indignant at the bare intimation that Col. Ludlow will be restored to duty, and if Secretary Foster's decision "turns them down" they threaten to resign in a body. This threat will undoubtedly be carried out, and the moment the decision is rendered Secretary Foster will find his Light-house Board hopelessly disrupted. But even this may be brought about, as there is no doubt plenty of "timber" at hand to speedily construct a new Board.

THE FREIGHT SITUATION.

The tendency toward higher freights is only gradual and the higher rates on ore are causing a decrease in the amount shipped. The dealers have resolved to bring down no unsold ore on which they would have to pay higher rates than a basis of $1.10 from Ashland and Two Harbors. The rate is now $1.20 and should the Duluth wheat rate (3½ cents) go up another notch, as it promises to do, the ore rate will reach the contract figure $1.25. From present indications, however, the rate will hardly go above that for several weeks yet. The Marquette rate has just been raised to $1.10, but the Escanaba rate remains at 75 cents.

Grain is pretty active both at Duluth and Chicago. The rate at the latter port dropped to 2¼ cents since the last issue of THE RECORD, but the feeling is very strong at that figure, and will probably soon return to 2½ cents.

Coal continues very scarce and the anthracite people have succeeded in getting the rate to the head of Lake Superior, which went up since last Thursday to 40 cents, down again to 25 cents. The soft coal rates have become tolerably well settled and boats are receiving 40 cents to Lake Superior ports, 55 cents to Milwaukee and Chicago, 50 cents to Manitowoc, 45 cents to Escanaba and Gladstone, 75 cents to Racine, 40 cents to the Straits and Lake Huron ports, and 35 cents to the Rivers.

SPEED OF LAKE VESSELS.

Extreme speed is not useful in the freight-carrying business on the lakes. It can only be obtained at a sacrifice of carrying capacity greater than any advantage which it gives. Fast and slow steamers must alike check down in the rivers connecting the lakes. They are, of course, equally subject to detention in port, and the small advantage which the fast steamer gains in her runs on the open lakes are more than counterbalanced by her diminished carrying capacity, greater consumption of fuel, greater cost of machinery, and greater expense in the engine room. Nevertheless, there are a large number of steamers on the lakes which are capable of making good time. The two fastest steamers are undoubtedly the Owego and Chemung, both owned by the Union Steamboat Co., (Erie Railway Line) and built by the Union Dry Dock Co., of Buffalo. The following are the dimensions of the Owego: Length over all, 350 feet, 7 inches; length of keel, 324 feet, 10 inches; extreme beam, 41 feet, 2 inches; moulded depth, 25 feet 6 inches.

The Owego has triple-expansion engines with cylinders 28, 42½ and 72 inches iu diameter, with 54 inch stroke, and 2,600 indicated horse power. She has six boilers, each 11 feet, 6 inches in diameter, by 11 feet, 6 inches long. She has a sectional screw wheel 15 feet, 6 inches in diameter with 21 feet pitch. The Owego and Chemung were built for the Union Steamboat Co. to engage in the carriage of package freight between Buffalo and Chicago, in connection with rail service on the Erie Railway. They cost about $330,000 each. The Owego holds the record of speed between Chicago and Buffalo. She has run the entire distance, 889 miles in fifty-four miles and fifteen minutes, an average of 16.4 miles per hour. Next to the Owego and Chemung in speed, probably come the steamers of the Lehigh Valley Transportation Company, also engaged in package freight service between Chicago and Buffalo, in connection with the rail service on the Lehigh Valley road. These vessels are 308 feet, 8 inches over all, of 40 feet beam and 25 feet, 6 inches moulded depth, with triple compound engines, indicating 1,650 horse power. The steamer Saranac, of this line, has run the distance from Buffalo to the Limekiln Crossing, Detroit River, 240 miles, in fifteen hours and ten minutes, or about 16 miles per hour. The speed of the great mass of new steel freighters on the lakes is not, however, so great as this. Most of these vessels make 12½ to 14 miles an hour loaded.

THE LARGEST DRY DOCK ON THE LAKES.

(Illustrated).

The supplement presented to THE MARINE RECORD subscribers with this issue, represents the largest dry dock on the lakes, and one that from its dimensions, staunch construction and location, is certain to enjoy a wide patronage among the larger class of vessel property.

The American Steel Barge Co., West Superior, Wis., realizing that their large steel fleet would require more or less dry docking, and that no facilities for this work was offered on the principal and largest of the lakes, determined to construct a dock of such dimensions as would accommodate two of the longest whalebacks at one time, and also the longest and heaviest tonnage which was likely ever to be put afloat on fresh water. A site was surveyed on their own ground and a small army of workmen were put to work excavating a few thousand tons of solid red clay. After the excavation was completed a forest of piles were driven and the entire constructive work was carried out in so thorough a manner that the first test of the dock proved it perfect. The following day one of the largest steamers on the lakes was docked for survey, with the result that extensive bottom repairs were ordered on her, and this work is now being carried out.

The dimensions of the new dry dock are 550 feet total length, 52 feet wide on the bottom and 90 feet wide at the water level. There is a depth of 15 feet, 2 inches over the miter sill, and the gate is 48 feet wide at the bottom. The dock can be filled in fifty minutes and pumped out in three and one half hours by two centrifugal pumps throwing 22,000 gallons a minute.

The bottom of the dock has been given a slight crown, with a good channel for drainage at the sides. A special arrangement for keel blocks has been devised, so that they can be moved to any point on the floor of the dock. The extensive machinery for the dry dock, including pumps, engines and boilers were furnished by Irvin Van Wie, of Syracuse, N. Y., and have given perfect satisfaction in their initial work.

The excellent facilities enjoyed by the American Steel Barge Co. for building, docking and repairing iron and steel vessels has been further advanced by the adoption of a special plant for carrying out work on wooden vessels, and tonnage frequenting Lake Superior may now be taken care of in as able and prompt a manner as is usual on the lower lakes.

THE IRON ORE TRAFFIC.

The transportation of iron ore forms the largest single item in the lake traffic. This ore is all mined in what is known as the Lake Superior ore region. In that region there are four separate ranges, the Gogebic, Marquette, Menominee and Vermillion ranges, lying in the States of Michigan, Minnesota and Wisconsin. Nearly all the product of these ranges is transported to the furnaces by water. The great bulk and weight of iron ore, in comparison with its value, makes it absolutely necessary that its transportation to the furnaces should be by the cheapest possible agency. Such a product could not be transported a great distance except by water. The lowest rail transportation would not make it possible to move these ores to the furnaces in Ohio, Pennsylvania and Illinois where they are chiefly consumed.

It is perfectly safe to say that the ore of Lake Superior could not have been developed at all except for the available water transportation provided by the Great Lakes. Here again one of the most important industries of the country, one whose volume is most often used to serve as a measure of the general business prosperity of the country, is vitally affected by the commerce of the lakes. In a bulletin recently issued by the Census Office, the total production of iron ore in the United States during the year ended December 31, 1889, is stated at 14,518,041 gross tons, produced by twenty-six States and two Territories. Of this amount the Lake Superior district produced 7,519,614 gross tons, or more than one-half of all the iron ore produced in the United States. In 1890 the Lake Superior region produced 9,003,701 gross tons of ore, an increase over the previous year of 1,500,000 tons. The ore from this Lake Superior region is of better quality than that of other parts of the United States. The average value of iron ore mined in the United States in 1889, on cars or carts at the mines, is given by the Census Bureau at $2.30 per ton. The value of such ore at the Lake Superior mines averaged $2.66 per ton, while the ores of Alabama, Tennessee, Virginia and West Virginia averaged only $1.20 per ton in value at the mines.

HOW ARE "TRAMPS" CHARTERED?

DETROIT, Mich., Sept. 22, 1892.

To the Editor of The Marine Record:

Please answer the following question in your next issue: "How does a tramp steamer receive her charters, through brokers, agents, or through the efforts of her owner?" I would like as inclusive an explanation as possible.

A SUBSCRIBER.

Tramp steamers, (and by this term we presume our correspondent means in the coast or ocean service), are usually chartered, outwards, at least, by their managing owner at the home port, and then, if no other cargo can be secured at the port of delivery, the "tramp" goes seeking, by changing ports. As in the lake trade, the master is at liberty to dispense with the services of a broker and secure his own cargo, if he so desires, and is sufficiently acquainted with the merchants, shippers and customs of the port. It is more desirable, however, to employ a broker, as their charges are moderate, they will protect the ship in all ordinary business transactions, facilitate the master's business on shore, and in many cases the consignee of a cargo is in the vessel agency and brokerage business, and has every facility for re-placing the ship, either at his own port or a neighboring one. The actual engaging of the vessel, however, is at the discretion of the master, who, if within easy distance, would communicate with his owners, and otherwise, act with good business judgment and for the best interests of the ship.

An experienced master, well known in the ports he trades to, can handle his vessel to the best advantage and engage freight wherever offered on the most advantageous terms. If the master is unacquainted, and the owner so desires, a reliable and well known broker might be advised of the probable time of the ship's arrival, so that a freight could be held ready for acceptance by the master. In the lake trade, the managing owner is within easy access, and may be communicated with in every instance.—ED.

CASUALTIES OF THE WEEK.

The heavy northwest gale that swept over the lakes on Sunday night resulted in the loss of two schooners and three lives on Lake Ontario.

The schooner John Burt, from Chicago to Oswego, with 23,000 bushels of corn, was driven past the latter port at 7 o'clock in the evening, and the next morning at about 11 o'clock she drove ashore four miles north of Big Sandy Life Saving Station and became a total loss. When the Burt passed Oswego she was sighted from the lighthouse and was at first running under bare poles. After a time she set a single reefed foresail, and kept away for the passage for the River St. Lawrence. The gale was too strong for her, however. Tremendous seas broke over her as soon as she struck the beach, and the female cook, name unknown, from Bay City, and William Wood, a sailor from Sand Beach, Mich., were carried overboard before assistance could reach the vessel. The John Burt was built at Detroit in 1871 by John Oades. She was owned by R. Kelley, of Detroit, was valued at $5,500 and was uninsured. Capt. Norman McDonald was in charge. His brother was first mate and his son was one of the sailors. The Burk left Chicago September 14, on what has proved to be her last trip.

The schooner Gazelle, of Fairhaven, was seen off that port making for the harbor, getting nearly to the lighthouse, where she capsized. Then she drifted down the lake and went ashore. There were three men on board, William Grant, Captain; Frank Wilson and Myron Pettie. They all hung on till they got within fifty feet of the shore, when one man, Wilson, gave out and was washed off. The other two were taken off safely, but much exhausted. The body of Wilson was seen but once after he was washed away. The Gazelle was owned by Captain Grant.

INSPECTION AND CLASSIFICATION BUREAU OF THE WORLD'S SHIPPING.

In the past several issues of THE MARINE RECORD some attention has been given to the several national bureaus for the inspection and classification of shipping.

Of these several societies, the greatest interest will undoubtedly be manifested in the bureau that classifies the United States' tonnage, we purpose therefore to furnish our readers with a brief history of this, the National Association.

"The Record of American and Foreign Shipping" is published by the American Shipmasters' Association, New York. The bureau has now been in existence for upwards of twenty-three years as a maritime register and classification record of nearly all American (lakes excepted) and a large proportion of foreign tonnage. The association, for it is not a capitalized company organized for profit, was incorporated by a special act of the legislature of the State of New York, on the 22nd April, 1862, continuing an association already formed. Its sole object is to promote the interests of American shipping and American seamen, and its work in that direction has found wide scope in endeavoring to establish a system of classification and rating of vessels that would merit the confidence of owners and underwriters' and up to the present every means has been employed to that end.

In the initial organization of the bureau certain principles and rules were drawn with care to secure proper workmanship and strength of material, these rules were formulated and adopted by the association for the construction of iron, steel, composite and wooden vessels, and their build and condition were published and class granted accordingly, subject to an occasional examination to insure continued maintenance in good condition. According to a very close estimate, it is found that about ninety per cent. of American sea-going vessels are now classified according to the rules of this association. The published reports of these vessels showing particulars of age, material and build, are of value to government as well as to private parties and many vessels classed in the "Record" have, with such aid, been inspected and reported upon favorably by naval boards of survey as being suitable, after some slight alteration, for service as auxiliary naval cruisers.

The "Record of American and Foreign Shipping" supplies to American commerce all the facilities that are provided by "Lloyd's Register" to British shipping interests, and as now issued, is ranking as a standard among the universally recognized registers of classification of the shipping world.

All maritime nations have experienced the necessity of having but one recognized standard for the rating of vessels; notably that of Great Britain; step by step with the advance of its maritime importance has value been placed upon the classification and rating as given in that standard, so that, notwithstanding the repeated efforts to introduce rival institutions to compete for supremacy, the classification and rating in "Lloyd's" has now become the only standard that controls in that kingdom. The "American Record" aims to accomplish the same work in America as is done by "Lloyd's Register" in England, and it is believed it compares favorably with it. The important inspection and classification bureaus of the world's shipping are as follows:

1st. The Record of the American and Foreign Shipping, published by the American Shipmasters' Association.

2nd. Lloyd's Register, English, backed by the English Board of Trade.

3rd. Bureau Veritas, France, a private stock concern.

4th. Germanischer Lloyd's.

5th. Register Italiano, Italy.

6th. Nederlander Uereeniging, Holland.

7th. Veritas Austro Hungarico, Austria.

8th. Norske Veritas, published by the underwriting clubs in Norway.

To come back to the "Record," we find that association employs about 110 reliable experts in most of the important ports in the world, to supply it with reliable information and also to examine and test with care the material and workmanship entering into vessel construction within their different districts, for which a class is desired. It also requires vessels to be opened for examination periodically, or when application may be made for re-classification, all of which is done to insure efficiency as well as the fullest confidence in the work of the institution. The revenue derived from surveys is devoted to improving the "Record" and promoting the objects for which the institution was established, and during its existence, the number of vessels classed has steadily increased. It may further be added that the "Record of American and Foreign Shipping" is the only book of classification in America that surveys, rates and classifies wooden as well as iron and steel ships.

During the quarter of a century of the "Record's" official existence, it has bought out the copyright, and consolidated with it, the "New York Maritime Register," established in 1857, later known as "American Lloyds Universal Record of Shipping," also in 1883, the original "American Lloyds" established in 1857. It will therefore be seen that the "Record of American and Foreign Shipping" as published since 1869 is the embodiment of, and has all the experience and rights relating to ship classification that has existed in America up to 1889. Then a joint stock company, under the name of the "United States Standard Steamship Owners, Builders and Underwriters' Association," started a book of rules for the classification of iron vessels only; this organization, however, has more of a local character, and has no office or agents in any of the chief ports of the world except in New York.

The "Record" early recognized the need of an American Register of Shipping for the merchant marine service possessing similar relation to the United States government that Lloyds English Register of Shipping does to that of Great Britain. With this object in view the association in 1889 submitted its rules for the construction of vessels, for the approval of the United States Navy Department, which appointed a Board of Experts for their examination, and reported unanimously sanctioning the rules; also recommending certain additional rules for the construction of machinery, etc., these requirements were complied with and approved. This Board of Naval Experts also sanctioned the advisability of all vessels selected by the government as auxiliary naval cruisers or transports to hold the rates established by the "Record of American and Foreign Shipping."

It may be understood from the foregoing that the "Record" is the universally recognized standard classification of American shipping, and holding as it does, the substantial endorsements set forth, is worthy of the highest confidence. Its ratings are of the highest known to maritime commerce, and as such, these ratings may, with due propriety, be adopted to conform with lake and river commerce.

An eminent writer on maritime subjects very truthfully states that, in every country where more than one marine register is compiled, the rivalry generally takes the form of reducing the standard of building and repairing, and leads to the tolerance of imported building and dangerous sailing of vessels. The shipping of Great Britain has furnished many examples of the deteriorating influence of two marine registers, no expert in ship inspection desirous of increasing the safety of life and property afloat, can recommend more than one book of classification in any country. It is also shown that inspection and classification should always be such as to influence the perfecting of ships rather than their cheapening. A high character and not a low price is the key to confidence and employment. It is to be hoped the vessel owners interest of the lakes is to be considered as of primary importance rather than that of a few individuals who are desirous of constructing light ships to carry excessive loads at the expense of a reduction of the scantlings, which always means a light ship without sufficient rigidity to endure the conditions incident to carrying heavy cargoes in rough weather or the groundings and other consequent heavy treatment to which the construction is liable to undergo in the exigencies of a special trade.

CLASSIFICATION MEETING POSTPONED.

The proposed meeting of the general managers of marine insurance companies doing business on the lakes, and the officers of a New York classification bureau, which was to have taken place at Detroit yesterday, as announced in our issue of the 22nd, has been postponed until after the close of navigation.

It seems that it was found impracticable to get a full attendance at the present time on account the press of business at this brisk period of the season, and unanimous action on the rules of inspection, survey and classification are of absolute importance in the re-adjustment of class and ratings.

PATRIOTISM, INDEED!

Timothy Hogan & Sons, through patriotic (?) motives had their English built steamers Montauk and Mineola granted American registers by an easily influenced Congress, in their desire to float the Stars and Stripes over the commerce of the world, have again displayed their style of patriotism by going to English shipyards and having built for their account the rough looking specimen of a tramp in the new steamer Monomoy, now at this port. It is to be supposed that with their knowledge of how to procure American Registers, despite the law regulating the granting of them, she will be classed as an American vessel ere long, and will be allowed to compete with such steamers as the El Norte, etc.—*Seaboard, New York.*

DETROIT RIVER TRAFFIC.

The Report of the Internal Commerce of the United States, compiled by S. G. Brock, chief of the Bureau of statistics, shows the commerce of the Great Lakes, the Mississippi River and its tributaries, for the year 1891.

Mr. Charles H. Keep, of Buffalo, as special agent of the Census Bureau, collected the *data* of the lakes, which occupies about two-thirds of the volume. The *Iron Trade Review* a short time ago engaged the services of Mr. Amstutz as special artist to illustrate the dockage and cargo handling facilities at all lake ports. This formed a very able report, which is partly embodied in the work, as is also the table of vessels under construction on the lakes in 1891.

A brief synopsis of the history of lake navigation, with but little of the details as published in consecutive issues of THE MARINE RECORD during the years 1885–7, is also contained in the report:

Figures regarding the tonnage passing through the Detroit river shows that in 1889, 19,717,860 tons passed Detroit, and in 1890 the traffic, including the foreign and coastwise traffic, amounted to 21,888,472 tons. The following table, taken from the report of Col. O. M. Poe, Corps of Engineers, U. S. A., gives the number of vessels and total tonnage passing both ways, from 1880 to 1890, inclusive:

Year.	No. of Vessels.	Registered Tonnage.	Year.	No. of Vessels.	Registered Tonnage.
1880	40,521	20,235,239	1886	38,261	18,968,065
1881	35,888	17,572,240	1887	38,125	18,864,250
1882	35,199	17,872,182	1888	31,404	19,099,060
1883	40,385	17,695,174	1889	32,415	19,646,000
1884	38,742	18,045,949	1890	35,640	21,684,000
1885	34,921	16,777,828			

This statement does not include Canadian vessels, a large number of which use this channel, nor does it include any vessels not clearing from the various custom houses with the above tonnage included. It is estimated that 28,000,000 net tons of freight passes through the channel at the Lime Kiln Crossing annually. The magnitude of the commerce through the Detroit River will appear more surprising if contrasted with the tonnage movement of our seaboard, and of some foreign ports.

The total vessel tonnage, entrances, and clearances of all the ports of the Atlantic coast of the United States in the foreign trade during the fiscal year 1890 amounted to 22,497,817 tons, and of the gulf coast 4,035,156, and the same tonnage of the Pacific Coast amounted to 4,261,680 tons, or of the entire seaboard, 30,794,653 tons.

From the foregoing figures it will be observed that the vessel tonnage passing through the Detroit river is about equal to the vessel tonnage of the Atlantic coast engaged in the foreign trade, about five times as large as the total tonnage of either the Gulf or Pacific Coast, and over two-thirds of the total tonnage of the entire seaboard of the United States engaged in the foreign trade. The vessel tonnage, entrances, and clearances in the foreign trade at London in 1890 was 13,480,767; of Liverpool for the same year 10,941,800, and of these two great maritime ports combined 24,422,568. It will be seen that the vessel tonnage passing through the Detroit River in 1890 was over 8,000,000 tons in excess of London, about double that of Liverpool, and nearly equal to the two combined, and this, too, in 228 days of open navigation, as compared to the 365 days of the comparative ports.

ANOTHER DASH TO WINDWARD.

THE MARINE RECORD has scarcely had time to receive the congratulations of its contemporaries on the recent addition to its pages, making it the largest illustrated marine paper in the United States, before along comes *Seaboard* of New York under the same press of canvas (or paper) and gives us a close hug to the weather shore, so that we now have to lighten the forms by throwing overboard even our column rules in the attempt to make another dash to windward. *Seaboard?* everyone one knows *Seaboard* as being the handsomely illustrated nautical newspaper published in New York, and whose columns teem with the choicest reading matter possible to dish out to the mercantile marine of the country. Messrs. Smith & Stanton the enterprising publishers and proprietors of our old-time contemporary are to be congratulated on the journalistic ability and vim which they have expended in placing *Seaboard* away ahead to the top notch of typography and illustrated technical art, and in furtherance of their aims in this direction we are pleased to note that the seaboard and lakes are to be literally united and connected by *Seaboard* through the opening of a lake marine department with headquarters at Detroit. We salute our friends and gladly hail the advent of another champion to advocate the needs and disseminate a wider knowledge of the enhanced importance of the mercantile marine of the Great Lakes.

THE NEW PASSENGER STEAMER FOR THE L. M. & L. S. TRANSPORTATION CO.

The contract signed by the Chicago Ship Building Company last week, calls for the construction of one of the finest passenger steamers that will be put afloat on fresh water for some time to come. The new boat is to be built to the order of the Lake Michigan & Lake Superior Transportation Company, of Chicago, who already have a handsome fleet of five first-class passenger and freight steamers in their line. A brief description of the new steamer has been given in our issue of the 22nd inst., since which time we have been furnished with more exact particulars of the general dimensions, etc.

The entire construction is to be of a high quality of steel throughout, length over all 295 feet, keel 275 feet, beam 42 feet, depth to spar deck 24½ feet, depth to hurricane deck 32 feet, double water bottom for ballast 3½ feet. Seven water-tight bulkheads, one at each end of the ship, two in the freight hold, one at each end of the boilers and one abaft the machinery. Engines of the triple expansion type, diameter of cylinders 23, 38 and 62 by 36 inch stroke of piston, two double-ended Scotch type boilers 11½ feet by 20 feet feet and two masts.

The steamer will be fitted with state-room accommodation for about 400 passengers. Passenger gangway will be broad, aft of the engine on main deck, on the quarter deck, which will be finished in polished mahogany, where the clerk's office, steward's office, coat room, baggage rooms, etc., will be located. A grand staircase leads from this deck to the saloon deck, with a double-tier of state-rooms on each side, making a fine apartment finished all in mahogany, lighted by a handsome dome with beveled glass. The dining saloon is placed forward on the same deck, finished in birch, and will be one of the attractions of the steamer. It will extend the full width of the ship, about fifty feet long, with large brass side lights and dome skylight overhead, it will be divided from the main saloon by large sliding beveled glass doors.

The hurricane or promenade deck will be reached by a wide staircase from the main saloon, all under cover, and will be about 13½ feet wide and about 290 feet long on each side of the ship. A large ladies' parlor and music room will be furnished aft on upper deck, while the gentlemens' smoking room will be located forward. The furniture, bedding and general outfit will be the finest, it being the intention to make this a model passenger steamer in every respect and to surpass anything now afloat on the lakes.

She is also to be lighted by electricity throughout, supplied by two dynamos, one of 500 and the other of 125 lights, furnished by two separate automatic driving engines, and separate circuit for different parts of the ship. Her equipment is to be of the best that money or modern ingenuity can furnish and will include the "Providence" steam windlass and capstans, steam steering gear, duplex telegraph gongs, steam pumps, decks hoisting engines and every modern appliance for the convenience of passengers and the handling of ship and cargo. Her freight capacity is 1,500 tons, coal bunkers for about 250 tons coal, guaranteed speed 16 to 17 miles an hour, and cost about $300,000.

The steamer is intended to ply between Chicago, Mackinac Island, Sault Ste. Marie, etc., in connection with other steamers of this well-known line, although nothing definite has as yet been decided upon regarding her exact route.

The officers of the L. M. & L. S. Trans. Co. are Samuel F. Leopold, president; A. T. Spencer, vice-president; Charles F. A. Spencer, secretary and treasurer; Joseph Austrian, general manager; Jos. Berolzheim, general freight and passenger agent; and F. C. Crager, contracting and assistant freight agent.

THE STEEL STEAMER W. H. GILCHER.

BUILT BY THE CLEVELAND SHIP BUILDING COMPANY CARRIES THE PENNANT FOR THE LATEST BIG CARGO.

(Illustrated.)

So much interest has recently been centered in the general dimensions and ability of the large fleet of steel steamers put afloat on the lakes during the past few years, that we herewith reproduce a snap-shot photograph taken of the staunch built and highly efficient steamer W. H. Gilcher, recently constructed at the yards of the Cleveland Ship Building Company, to the order of J. C. Gilchrist, of Vermillion, O., and others.

The Gilcher's record cargo, which was carried a few days ago between Chicago and Buffalo, was 113,885 bushels of wheat, beating the largest previous cargo by 46 bushels. The general dimensions of the hull of the W. H. Gilcher are 320 feet over all, 300 feet keel, 41 feet beam and 25 feet moulded depth. Her engines are of the triple expansion type, and she is fitted with all modern equipments. In construction the Gilcher represents one of the strongest built modern steel steamers afloat. Her side and sister keelsons run continuously up the whole length of the stem from floors to top of turtle-back, and spaced four feet apart from centers, thus forming heavy breast-hooks. All of her frames forward of the collision bulkhead are spaced twelve inches between centers, and her top-gallant forecastle is built up with steel Z-bar frames two feet between centers and plated to rail, thus affording extra strength and stability in what may be considered the most important structural part of the vessel.

The method of re-producing an illustration from a photograph has the merit of showing the steamer exactly as she is, a feature which does not enter into the re-production when taken from a painting; so that the W. H. Gilcher, as shown herewith, is a true representation of the latest lake "record-breaker" in wheat carrying cargoes.

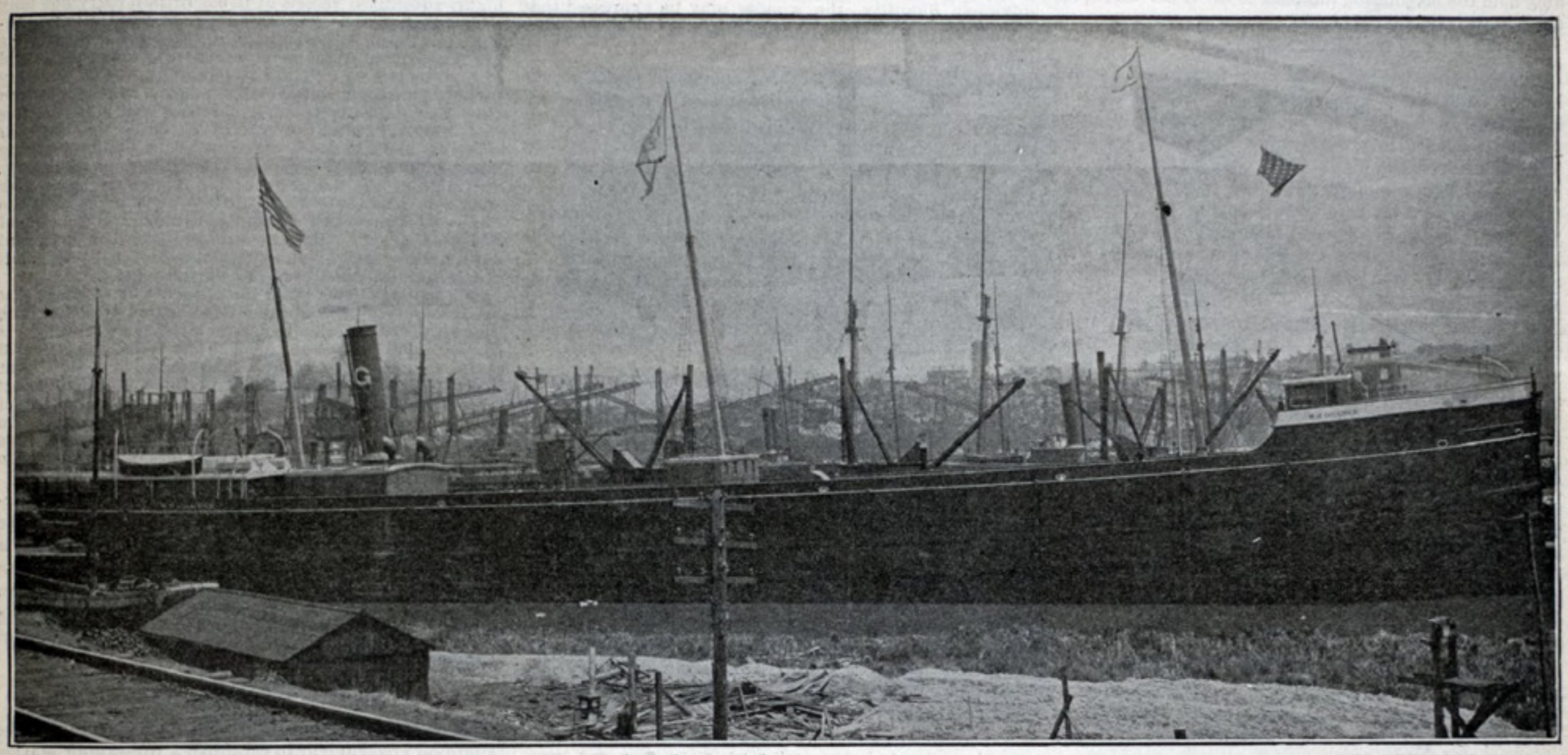
THE MARINE RECORD, Cleveland, Ohio, presents to its readers handsome photogravures of notable lake tonnage. The enterprise shown by the proprietors of THE RECORD is commmendable.—*Sandusky Register.*

LONGITUDINAL STRENGTH OF METAL VESSELS.

The firm of W. H. Brown's Sons, of Pittsburg, Pa., have constructed the first steel coal barge ever built for the river traffic. Her dimensions are 135 feet long, 24 feet beam and 7 feet 9 inches depth of hold.

The expense of building and repairing river barges every year is a big item to the coal men. Most of the large operators keep on hand from 300 to 400 wooden barges. One of these costs $1,400 to build, and its life is on an average 10 years. In that time the repairs will amount to another $1,400. It is estimated that the steel craft will cost three times the amount of wooden ones, but it is expected that they will last 25 years, if not longer, and will not need much repairing. If the barge sinks it will lie in the same place, and with its cargo can be raised. Wooden barges frequently go to pieces and the coal is therefore scattered along the bed of the river.

In view of the longitudinal strength required in a barge of such a length it would not require much figuring by a naval architect to pronounce a vessel of these dimensions as being unable to sustain her efficiency. Transverse strength she may have, but the rigidity of length is surely at a low percentage when a depth of less than 8 feet is frequently required to support on an unequal surface of flotation a construction seventeen times the length of its height. Ship construction is after all a good deal like bridge building, wherein length is subject to depth or altitude.



STEAMER "W. H. GILCHER,"

NOW HOLDING THE RECORD FOR THE LARGEST CARGO OF WHEAT CARRIED ON THE LAKES.

A NEW WHITE STAR LINER.

The new Transatlantic steamer to be built by Messrs. Harland and Wolff for the White Star line is to be called the Gigantic, and is to be a record-cutting craft. She will be 700 feet long by 65.7½ feet beam, of 45,000 horse power, and to steam 22 knots from port to port. It is rumored that the boat will attain a maximum speed of 27 knots, and cross the Atlantic in four and a half days. She will have three screws. Two of them will be fitted similar to those in the Majestic; the third screw will be central, and similar in position to the single screw on board an ordinary steamer. The Gigantic will not be commenced till next year, and it is expected that she will be ready for sea in April, 1894.

TO TRANSPORT CARS ACROSS LAKE MICHIGAN.

The Craig Ship Building Company, Toledo, O., sent out handsome invitations this week to vesselmen to attend the launch on Wednesday afternoon, of the Toledo, Ann Arbor and North Michigan's railway steamer "Ann Arbor No. 1," the first steamer ever built to transport railroad cars across Lake Michigan.

The general dimensions of the hull and machinery of the steamer are, 261 feet over all, 52 feet beam and 18 feet depth of hold. Engines, three compound, each 20 and 40 inches diameter of cylinders by 36 inches stroke of piston, boilers, four steel fire box. Capacity of steamer 24 loaded cars.

The Marine Record,

ESTABLISHED 1878.

Published every Thursday, at 144 Superior Street (Leader Building,) CLEVELAND, O.

IRVING B. SMITH. }
CAPT. JOHN SWAINSON. } - - - Proprietors.

BRANCH OFFICE.

CHICAGO ILL., - - - 35 Franklin St.

THOMAS WILLIAMS, Associate Editor.

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CLEVELAND, O., SEPTEMBER 29, 1892.

THE RECORD is pleased to acknowledge the receipt of a copy of the "Report on the internal commerce of the United States" from Congressman Vincent A. Taylor, of Bedford, O. The excellent legislative aid rendered by Mr. Taylor in the interests of Cleveland and the lakes at large during the last session of Congress is worthy of commendation and it is to be hoped that his successor will as ably hold the lakemarine interests to the front whenever the opportunity presents itself.

THE adoption, or near approach thereto, of Colonel Ludlow's and Commander Heyerman's plans for lighting the St. Mary's river, and the subsequent reports of other officers detailed to look closely over the ground, indicates that the completion of the work over which there has been such a perverse spirit exhibited, should never have been allowed to come before the people in the manner it has. That the officers recently in charge of the Eleventh Lighthouse District acted solely for the best interests of those most interested in the safe navigation of St. Mary's River is without a doubt. It is also clearly the desire of vessel owners to see those officers re-instated, and every effort is being made to bring about such a result. However the forms of departmental procedure may have been transgressed, the error (if any existed) was through a commendable zeal for the best interests of the service, and on this fact alone, the meaning of a word, phrase or sentence, admittedly capable of a literal misconstruction, is entitled to a sympathetic consideration, if not a relaxation of strictly departmental discipline rulings where a doubt of the conception of an order exists. The Secretary of the Treasury has taken this important case under advisement, and his final decision, which will no doubt be an impartial and righteous one, is eagerly awaited on the lakes.

HOW FAR IS THE COMPASS TO BLAME?

The cause of the whaleback steamer Wetmore standing on the Pacific Coast is now said to be due to "some apparent derangement of her compass," as, when the master last sighted land, he was forty miles from shore, and when his steamer stranded he supposed he was still that distance off. Admitting that a point of land was sighted, which, by steering a certain course, would have kept the vessel forty miles away from the spot where she beached, there is surely something for the Pacific Coast traders and others to learn from the casualty brought about in only a couple of days' run from the time a departure was last taken.

It is more than possible that the compass is being saddled these times with a great deal of blame that does not really belong to it, or else the mechanical work in its construction is being slighted more than ever before. If this is so, the earlier the sailing community can be apprised of the fact, the better it will be for the safety of life and property. Several recent lake strandings are also attributable to the eccentricities and irregular workings of the compass, and it is just possible that the country is being flooded with cheap, unreliable and poorly constructed "path projectors," impossible to adjust and aggravatingly contradictory in the corrections to be applied.

It is somewhat difficult to find out even the partial uselessness of an instrument without carrying it for several trips, and during that time a casualty involving the loss of the ship might occur. It is, therefore, of primal importance, that the quality and workmanship of the compass should be carefully examined and only the best manufactured accepted in the outfit for new vessels, as well as at any subsequent period when such an instrument is required for ship's use.

However, as we have said, perhaps the compass is not always responsible for the misleading tracks plotted out. It may be that too little attention is paid to a change of variation, a change, which in itself, makes a maximum difference of no less than two points in the courses steered between Lake Ontario and Lake Superior. Another source, and one equally important, is the deviation to be found on the courses steered by iron and steel vessels, for which seldom a due allowance is made, preference being given to checking the courses made by sighting the land. In clear weather such a check is more convenient and answers all practical purposes, but, when the weather is thick, there is an uncalled for anxiety experienced and perhaps a temptation to overrun the distance so as to pick up something, if only a fog whistle, or light. In the former case too much stress cannot be laid on the known aberration of the audibility of sound, and this feature exists in a preponderating degree on the lakes, while the visibility of a light, in the varying atmospheric conditions on fresh water, is widely admitted as being susceptible of careful scrutiny during the prevalence of thick weather, and especially so in regard to the local characteristics of fog.

Another feature which regularly calls for the utmost skill, experience and circumspection from the officers of lake steamers, is the generally unknown factor of currents, for, although those most experienced no doubt usually project a current course, the majority of lake pilots allow one set or drift to counteract another, in the same manner as tides may be roughly and are practically allowed for on the coast. Yet, in steering over a course during thick weather, when the set is all one way, it would be impossible to keep the run of the ship without projecting a current course, and as this is a generally unknown quantity, the wonder may be expressed that casualties in certain localities are not more frequent than they are.

Given the three conditions, of change in variation, the known deviation on the courses steered, and a fair knowledge of the set and drift of a current, courses can no doubt be made with a fair degree of accuracy, providing the seaman is given a good reliable compass, without which, the most careful pilot is liable to make not only a bad landfall, but in these land-locked waters to jeopardize the ship and the lives under his charge. So that the prime element of safety lies in the proper mechanical construction and skillful adjustment of compasses, as opposed to cheap trumpery instruments badly adjusted, and permitting a ship to wander at times an unconscionable distance out of her course.

The heeling error caused by a ship carrying a heavy list when steering on polar courses, or the much-talked of deviation attributed to a series of local attractions when in with the land has no doubt been somewhat overdrawn, as the former cause does not enter into the the features of lake navigation to any extent, and a very near local contact is necessary before the construction of a compass becomes affected, so that there would be imminent danger of stranding through a too near proximity to the source of attraction, at the time the magnetic needles indicated the effect of a deviation from the course shaped.

That the heeling error has been responsible for some heavy losses, is apparent from the fact that last year no less than four vessels in the Baltic trade stranded within as many weeks, in one day after leaving port, and it was held as not surprising to find that one of these vessels went ashore forty miles from her assumed position and another thirty miles west of where her officers supposed she was at the time of stranding. These casualties were distinctly attributable to the heeling error induced by poor workmanship and material in the compasses and there may be many more of these property destroying implements in existence on which masters have expended time, talent and energy to get their ships along safely. A compass that is sluggish and shows other irregularities should at once be thoroughly overhauled, or peremptorily discarded.

SHIPPING SUBSIDIES.

Under the guise of naval reserve emoluments, mail subsidies and compensation for the right to enroll large, high-classed steamers as auxiliary armed cruisers, the British government can be said to most-skillfully subsidize her principal avenues of maritime commerce and the almost undisputed supremacy of the ocean carrying trade which she now enjoys. The majority of her seamen are also held in a favorable proximity to the naval exigencies of the nation by the nominal bounty of $15 per year, paid quarterly as a retaining fee to the seamen, fisherman and harbor boatmen of the country, to still further hold this nucleus of a competent and well-trained naval nursery well in hand, the British naval authorities require each member of the reserve to enter the most convenient district, free of transportation charges, and perform a two weeks' annual drill, for which subsistence money at the rate of about $1 per day is issued to each member while on duty.

Under such a discreet, munificent and national system of maritime encouragement, there is little reason to wonder at the prosperity of the English mercantile marine, for, besides holding their own forces well in hand by the foregoing methods, they seriously cripple the efforts of less enterprising maritime powers in their attempts to obtain a foothold in the commercial marts of the world. Italy, France, Germany, Spain and other nations, long ago realized the importance of assisting and fostering in so far as legislative issues would permit, the floating commerce carried on under their national flags, had this been otherwise, the present limited over-sea tonnage of these nations would have been still more conspicuous by their absence than that they now are.

The question most naturally arising in the mind of an American, after re-hearing a statement like the foregoing, is, what are we doing to encourage and assist our mercantile marine? Why, simply nothing! And perhaps worse than nothing, when we are brought to the humiliating standpoint of craving legislation to permit a foreign power to build ships for us to fly the stars and stripes from, or over.

In the protection of industries which it is desired to foster and build up, and establish in the United States, as in other countries, the system of protection has met with the widest possible favor and general endorsement. Why, then, should an exception be made in the mercantile marine service of the country? In this connection the Chicago *Inter Ocean* ably comments as follows:

"England has not discarded the policy of protection to her mercantile marine. Under the guise of compensation for mail service, she pays large bounties to the noble steamships that carry her flag and her commerce and her traveling subjects. Unfortunately for us these highly subsidized vessels of Great Britain carry not only the commerce and the passengers of the United Kingdom, but those of the United States also. Britain pays her Atlantic mail steamers just twice as much per pound of mail matter as we allow to our ships. It is not easy for an American line of steamships, sailing between New York and Liverpool, to compete with a British line that is subsidized at the rate of $1,140,250 per year for carrying mails between the same ports, besides drawing a large allowance as a part of the British naval reserve. Still slighter are the chances of American trade with Asia and Australia while British lines of steamers to the ports of these countries are subsidized at the rate of $2,174,000 a year. Britain still protects her merchant navy, and her merchant navy is about all that now is left of her once universal commercial supremacy."

On the other hand, in all the branches of industry that America has protected, and from which Great Britain has withdrawn protection; supremacy has passed, or is passing rapidly, from the East to the West. The United States now is the great iron manufacturer of the world. The tin-plate manufacture soon will have its chief seat in the United States. Year by year we wear more of our own wool and spin more of our own cotton. In every protected industry we excel. Our shiping trade alone languishes, and it is the only great industry from which we have withheld adequate protection."

There is a volume of logic in the convincing statements heralded in the foregoing quotation and the sovereign people should see to it that the United States is provided with a merchant marine commensurate with the glorious prestige and importance of the country, even if every seaman now in the service and every ship flying the stars and stripes had to be paid double the amount of the sums furnished by the British.

NOTES.

The City Council of Southampton, Ont., has asked the Dominion government to establish a life-saving station at that port, and to suitably reward W. M. Lambert, the lightkeeper at Chantry Island, who rowed out recently in a terrible storm and rescued Capt. Caldwell, John Bullock and Wm. Breckenridge from the sinking schooner Netty Woodward. Lambert made a desperate attempt to rescue two other sailors, but they were washed away before he could reach them.

The crew of the life-saving station on Middle Island, Lake Huron, has just rendered efficient and valuable service to the stranded schooner Skylark, which went ashore in that vicinity during a thick fog. The vessel was released last Friday, the following day, after stranding. She did not jettison any of her cargo, and by the aid rendered in running out anchors, etc., she came off the rocks apparently uninjured, except a slight damage to her upper works caused by heaving her off the surf. The vessel was ultimately taken into Alpena, where a survey was held. Capt Donald McKenzie, keeper of the Middle Island Life-Saving Station, is one of the most skilled and energetic officers in the service.

The levying of tolls by the United States Government on Canadian freight passing through their canal at the Sault does not in the least diminish the amount of tonnage of freight the Beatty line of steamers carry between Sarnia and Duluth. The recent decision of the U. S. Washington authorities in charging that line tolls for Manitoba wheat unloaded at the Port Huron elevator, has resulted in compelling the company to have the entire cargoes of grain carried by their steamers discharged at the Grand Trunk elevator at Point Edward, giving employment to a large number of men when the steamers arrive which otherwise would of course go to citizens of the United States.

CAN SHE BE SEIZED?

WIARTON, Ont., Sept. 21, 1892.

To the Editor of The Marine Record:

Will you inform me through the columns of THE RECORD as to whether a United States officer can follow and seize a Canadian vessel in Canadian waters for a breach of the American Customs law. The exact case is as follows: A boat entered Detroit and left without clearing. During that month she has burned and sunk on the Canadian side of the river. After laying for two years under water she was raised and repaired. Can the United States now seize her in Canadian waters to recover the Customs penalty for not clearing at the Custom House?

There is no precedent for such an action on the lakes and the seizure without due process of law, through the Canadian courts, would be generally considered as illegal. There are two cases recorded where a United States officer has made a seizure of an American vessel in Canadian waters and in the location mentioned (Detroit river), but in no case can we find that a United States officer is empowered to proceed into foreign waters and seize a vessel of that nationality for a breach of the customs regulations, nor do we think that our Canadian friend need feel any uneasiness on that score, while trading solely in waters belonging to the Dominion, the vessel having been sunk for two years, passed out of official existence and can no doubt be re-documented under another official number and name.

There is a doubt, however, relative to the existence of a treaty bearing on lake shipping, which may admit of a vessel of either nationality being pursued for a breach of the Customs laws at lake ports, this treaty we have been unable to find, nor do we recollect a case where such a procedure has been carried into effect.—ED.

LICENSED CHIEF AND ASSISTANT ENGINEERS.

There is certainly a multitude of chances to qualify as a chief or first assistant engineer under the rules of the Board of Supervising Inspectors of steam vessels. The minutely classified tonnage for which licenses for the above mentioned grades may be issued, are as follows:

Ocean steamers, condensing lake, bay and sound steamers, noncondensing lake, bay and sound steamers, condensing river steamers, noncondensing river steamers, condensing freight, towing and fishing steamers, noncondensing freight, towing and fishing steamers, condensing steamers under one hundred tons, noncondensing steamers under one hundred tons, canal steamers.

Any person holding a chief engineer's license shall be permitted to act as first assistant on any steamers of double the tonnage of same class named in said chief's license.

A NEW SIDE-LIGHT LENS.

The necessity for having good side lights on vessels, and the poorness generally of the lights, especially on small vessels, have caused no end of trouble. In order to avert all complaint in this matter an inventor in England has recently discovered that an efficient substitute for the ordinary solid and expensive lens supposed to be used for side-lights can be made by making a hollow lens and filling the hollow with glycerine colored red for the port lamp and green for the starboard,

Some experiments have been tried with this new sort of lens for the benefit of the Board of Trade at London. A good green lamp of the regulation order was tested with a photometric apparatus. It shows 18 1-2 candle power. Then the same flame was put in a lamp that was covered with a hollow lens filled with pure glycerine, and over this was placed a green glass shade. Here the test showed 52 candle power.

Since the new lens gives better results than a solid lens it is scarcely likely that dealers will sell it for much less than the ordinary good solid lens brings, but the manufacturers assert that it is to be put on the market at the price of the cheap lamps commonly carried.

When the lamps have been tested in extreme cold air, a good many people think that a low temperature will affect the glycerine lens unfavorably, and in any case it would be advisable to go slow in the adoption of such a lens until its qualities have been thoroughly tested.

FOR SEAMEN DESERTING FROM THEIR SHIPS.

A treaty between Great Britain and the United States has been ratified respecting merchant seamen deserters and is now in force. It stipulates that consuls general, consuls or agents of either of the contracting parties, residing in the dominions, possessions or colonies of the other, shall have power to require from the proper authorities the assistance provided by law for the apprehension, recovery and restoration of seamen who shall desert from any ship belonging to a subject or citizen of their respective countries while in ports of the other country; but the stipulation will not apply to subjects of the country where the desertion takes place.

A LAKE DRY DOCK BUILDER.

The successful completion of the large dry dock of the American Steel Barge Company, at West Superior, Wis., is largely attributable to the well-devised plans of Civil Engineer George E. Hartnell, of Cleveland, O., whose portrait is herewith presented to our readers.

This eminent lake dry dock builder has been engaged in the civil engineering profession for the past thirty years, during which time he has devoted considerable study to the art of building efficient and commodious wooden dry docks.

The first dry dock work undertaken by Mr. Hartnell was the construction of the Ship Owners' dry dock at Cleveland in 1888, and in spite of innumerable difficulties encountered in the locality of the excavation the dock was opened and has proved its faithful and well-planned construction during the past few years. When the second dock was determined upon, the directors of the company were so well satisfied with their first dock that Mr. Hartnell's services were again brought into requisition and the plans, constructive work and superintendence of dry dock No. 2 was intrusted to his hands with the result that it has been in continuous service and given the best possible satisfaction since its opening.

With such a recommendation as the foregoing, Capt. Alex McDougall, general manager of the American Steel Barge Company, instructed Mr. Hartnell to plan the construction and machinery equipment of the largest dry dock on the lakes for the West Superior shipyard. These plans were carried into effect, and almost as soon as tested the immense dock received the large wooden steamer Neshoto for extensive bottom repairs.

GEORGE E. HARTNELL.

The fact that this large wooden dry dock was found to be perfect at the first test, speaks very highly for the entire constructive work, which Mr. Hartnell also superintended.

SURVEY ON THE NESHOTO.

According to the survey on the steamer Neshoto, she will require forty floor frames, a new forefoot, sixty feet of keel and garboards, and thorough recalking inside and out. The cost of the work, it is estimated, will not exceed $9,000. The amount of coal jettisoned in order to effect the release of the steamer was 952 tons. Capt. McDougall has a force of ship carpenters for the work on the Neshoto, but no calkers. The latter will be obtained from Milwaukee. The supply of ship timber at West Superior was rather limited, but an abundance has been ordered from various points and will be furnished at once. The great dry dock which the Neshoto occupies is said to be perfect in all its details. Although 550 feet in length and of appropriate width and depth, it can be pumped out in about three hours.

WHAT THEY SAY OF US.

Our excellent contemporary, THE MARINE RECORD, has added four pages to itself and assumed more typographic attire—two moves that speak of an appreciative clientage and a readiness of editor and publisher to give readers and advertisers the benefit of increased prosperity.—*The Iron Trade Review.*

THE MARINE RECORD, Cleveland, O., comes out in enlarged and improved form. THE RECORD is all that its name implies.—*The Milwaukee, Wisconsin.*

IN MEMORIAM.

Joseph Cook was born at Detroit, Mich., August 22, 1822, and died at Detroit, Mich., May 29, 1891. He began early in life the study of steam engineering, and later he held some of the foremost and most responsible positions on some of the largest steamers navigating the great Northwestern lakes, as chief engineer of such vessels. He was appointed local inspector of steam vessels at Detroit, Mich., in 1868, which position he filled in a most creditable and efficient manner for nine years, when he was appointed supervising inspector of steam vessels for the eighth supervising district, by President Hayes, September 26th, 1877, and held that position for eight years, when he retired; but was re-appointed by President Harrison, January 21, 1890, and served until the date of his death.

This, in brief, is the public record of a man, who, in every avocation and walk of life in which it was his lot to move, endeared himself to all with whom he came in contact. He was a man of unflinching integrity, strictest honesty, positive convictions, and never hesitated to perform his duty fearlessly and impartially at all times and under all circumstances.

As an officer of the Government he was honest, conscientious and faithful in the discharge of the high trust reposed in him, and a credit to the service in which he was an honored and highly respected member. In his death the Steamboat Inspection Service lost one of its most efficient officers, and the community in which he lived an honest, useful and upright citizen.

NEW LAKE TONNAGE ASSIGNED OFFICIAL NUMBERS.

The following is a list of new lake tonnage and their port of hail, with net tonnage, to which official numbers have been assigned by the Bureau of Navigation, Treasury Department, Washington, D. C., during the month ending September 24th, 1892: Steam vessels, Anabel, Marquette, Mich., 35 tons; Florence B., Detroit, Mich., 20 tons; Indra, Buffalo, N. Y., 7 tons; Morning Star, Marquette, Mich., 7 tons; Outing, Ogdensburg, N. Y., 10 tons; W. N. Peckham, Buffalo, N. Y., 9 tons; Squatter, Chicago, Ill., 6 tons; Anna, Grand Haven, Mich., 13 tons; Eliza, Duluth, Minn., 8 tons; Excelsior, Buffalo, N. Y., 37 tons; J. H. Marston, Milwaukee, Wis., 75 tons; Sir Luke, Marquette, Mich, 35 tons. Sailing vessels, Margie E. Marquette, Mich., 39 tons.

IN SUPREME COMMAND.

There is a good story and a most characteristic one told of the late Admiral Goldsborough. It is not in any way an orthodox utterance, but to be perfectly truthful, the Admiral made no pretensions to being orthodox in matters either sacred or profane, as the incident will bear witness. It was during a trip to the Mediterranean, when the admiral was in command of the fleet that the chaplain, a zealous young man, preferred request to hold services on board the flag-ship on Sunday morning. The first Sunday after the permission had been given, the young chaplain's trepidation gave place to supreme satisfaction when he noted that, with the exception of the admiral, the officers and men of the fleet were assembled in full force. After waiting for a few moments for the admiral, who failed to appear, the chaplain opened the services in regulation manner: "The Lord is in His holy temple, let all the earth keep silence before him. As the voice rung out in the opening words the admiral walked on the deck, and though his face betokened a storm, he took his seat in silence, and so remained until the congregation had been dismissed.

Then he rose, and striding over to the chaplain, said: "Young man, I want you to understand in the future that the Lord is not in his holy temple until I, Admiral Goldsborough, am on deck."

SUPERINTENDENT OF THE 9TH LIFE-SAVING DISTRICT.

A Washington dispatch states that Secretary Foster has appointed Capt. Edwin T. Chapman, keeper of the Oswego, N. Y., life-saving station, superintendent of the ninth life-saving district, to succeed Capt. Dobbins, of Buffalo, whose death occurred recently. Capt. Chapman is ordered to report to the general superintendent of the life-saving service, S. I. Kimball, for examination in the duties which he will be called upon to perform in his new office.

The appointment of an officer in the line of promotion is highly satisfactory and marks a commendable discretion in the appointing power. Secretary Foster's choice cannot but meet with the approval of all interested in the efficiency of the service.

"SOO" RIVER TUGS.

SAULT STE. MARIE, MICH.—The tug Brockway of Port Huron, Capt. A. D. Thompson will be located for the remainder of the season at Garden River and the Merrick will remain at the "Soo" as usual.

MARITIME LAW.

DEMURRAGE—TIME WITHIN WHICH BERTH TO BE PROVIDED—CHARTER STIPULATONS—DISCHARGE "AS FAST AS A SHIP CAN DELIVER."

U. S. District Court, Southern District of New York.

The absence of any charter stipulation as to the time wherein which a berth shall be provided for a ship after arrival, the berth must be provided within a reasonable time, or such time as usage prescribes, which by the ordinary usage of the port of New York, is 24 hours after notice of arrival.

The charter of a four hatch vessel provided that the ship should discharge "as fast as she can deliver": the charter said nothing about the number of hatches to be used; the wharves in the port of New York at which four hatches can be worked at once are the exception and not the rule; that was no evidence that vessels of such size are accustomed to discharge from all four hatches at once. Held, that in such case the charterer fulfilled his duty, by sending the ship to a reasonably fit berth, considering her size, and at such berth by seeing to it that there are no hindrances upon the dock, so that the vessel may discharge as fast as she can deliver with the usual appliances therefor.

After a ship is at her berth, and permit to discharge obtained, the charterers are liable for delay caused by the non-attendance of a Custom House officer. BROWN J.

The charter of a steamer provided that she "should discharge at one safe-berth as ordered by charterers, any subsequent remove to be at charterers' expense." Another stipulation was that she should "be discharged as fast as she can deliver in ordinary working hours." The latter stipulation relates to the rate of discharge after she commences; it has nothing to do with the time within which a berth should be provided after arrival. In the absence of any charter stipulation on that point, or as to when the lay days begin, the berth must be provided within a reasonable time, or such time as usage prescribes. By the ordinary usage of the port of New York, 24 hours after notice of arrival is allowed for procuring a berth. Within the usual time a berth, to which the vessel was directed, was ready for her; but through the vessel's faulty conduct in coming prior to the time notified, and then going away at once, instead of lying alongside and waiting a few hours as she might have done, for the time appointed, she did not get into her berth until the evening of the 11th; and the discharge was begun on the following day. It being high water from 8 to 9 o'clock a. m., she could have taken her berth as well at half-past ten or eleven a. m. on the 11th, as at six p. m. No demurrage, or towage, is, therefore, allowed for the 11th.

Cunningham, the stevedore, was employed by the ship's agents. He testifies explicitly that he never worked more than two gangs, nor from more than two hatches. The ship was, therefore, not prepared at that dock to deliver from more than two hatches. The provision of the charter that the consignees should take as "fast as the ship can deliver," did not bind them to take more than the ship was prepared to deliver, under such arrangements with the ship's stevedore for discharging as the ship herself had made, since the ship was bound to put the cargo over the ship's side. The respondents are answerable, however, for the half day's delay through the non-attendance of the Custom House officer during the forenoon of the 12th, after the ship had obtained a permit; Oarsanege vs. Wheeler, 16 Fed. Rep. 248. The master says that was the stevedore's fault, which would be the ship's fault. But I find that he is mistaken on that point. Through the encumbrance on the dock I find also that during the remaining half day of the 12th the consignees were not prepared to receive above half what the ship was prepared to deliver through the two hatches and by the two gangs of stevedores that she had provided. The libellants are, therefore, entitled to connt three quarters of a day's delay for December 12.

The respondents are also chargeable for half of December 13th, which was lost through delay in furnishing the transfer permit. The 14th was Sunday. The 17th was unfit to work through the rain. The ship finished discharging on Saturday, the 20th, at 1:30 p. m. The testimony shows that there was no hindrance or lack of diligence in the discharge at another dock after it was begun from such hatches as were in fact used, namely, two hatches prior to the 17th, and three hatches afterwards, and no complaint was made on that score. At this season "ordinary working hours" closed at sunset.

The libellant contends, however, that the stipulation of the charter that the ship should discharge "as fast as she can deliver in ordinary working hours," imposed on the consignee the obligation to receive from all four hatches at once; and to send the ship, moreover, to a berth where all four hatches should be worked at once. This construction, I think, is more rigid than the ship is entitled to. The charter is in one of the ship's own forms. It bears the stamp of her own agents. She is not entitled to read into it, therefore, by construction more than its language imports. The charter says nothing about the number of hatches that are to be used, nor the kind of berth to which the charterer is to assign the ship. The wharves at which four hatches can be worked at once are the exception and not the rule. There is no evidence of any usage to discharge any vessels from all the hatches at once. The evidence, so far as it shows anything on the subject, and from the libellant's own witnesses, is that only two hatches were customarily used at once, though this related probably to smaller vessels. Reported cases show that this stipulation in charters has been in use for at least 20 years; Dahl vs. Nelson, 6 App. Cas. 38, 42. In no case does it appear that such a construction of this clause has ever been given to it. In the recent case of the Glenfinlas, 42 Fed. Rep. 232, Aff. 1 U. S. App. 22, where the charter contained a similar provision, the ship was held entitled to discharge from two hatches, because the proofs showed that it was customary for vessels of her size, having four hatches, to discharge from at least two of them at once. It was also held in that case that under such a stipulation, the custom applicable to much smaller vessels was not applicable to a much larger one; and that she was entitled to a berth reasonable adapted to her size, and to discharge from as many hatches as was customary with other vessels of her size and class, if procurable. Such, I have no doubt is the reasonable construction of this clause, and what was intended by these parties. Had it been designed that she wonld be sent to a berth where four hatches should be used at once, and that all four must be used simultaneously, it should and would have been so stated in the charter, as was done in the case of Grant vs. Coverdale, 9 App. Cas. 471. I think it certain that no shipping men reading this charter, would understand from it any such agreement or obligation.

Aside from the language of the charter there is no evidence to show that vessels of this size or class are accustomed to discharge from four hatches at once. The libellent on this subject gave but a single word of testimony, to the effect that a wharf might have been procured where four hatches could be used. Where such a wharf was to be found was not stated, nor whether it was in the part of the port where the consignee under the discretion given him had a right to direct the ship for the economical transaction of his business. The evidence is insufficient, therefore, to show any breach or negleet of duty by the consignee in the selection of the wharf. The object of the charter in giving such a discretion to the consignee is that the cargo may be received at such place as may comport with necessary economy in the receipt, sale, or disposal of such cargoes. It is sufficient if the charterer sends the ship to a reasonably fit berth, considering her size and class. And the intention of the clause in question is, in my judgment, fully met if at such a berth the charterer sees that there are no hinderances upon the dock in the receipt and carrying away of the cargo, so that the vessel may discharge as fast as she can deliver with the usual appliances therefor.

If the respondents are held chargeable with the duty of discharging at three hatches, from the fact that upon the ship's demand for more rapid discharge they rigged up means for discharging from an additional hatch on the afternoon of the 16th, still I find that upon computation the consignee did not occupy on the whole a longer time than a discharge from three hatches all the time would allow them. The charterers were not required to unload at night, but only "in ordinary working hours." But the charter required that the vessel should "work at night when required by charterers, any extra expense thereby incurred to be paid by charterers." After the third hatch was prepared the respondents worked the ship for three nights, which presumably equals a saving of three days time. Charging against the respondents the loss of ¾ of a day on the 12th, ½ a day on the 13th, and the loss of one day more for the use of only two hatches, instead of three, from the 13th up to the afternoou of the 16th, there would be but 2 ¼ days lost time chargeable against them, which is less than the amount saved by night work. As there is no proof that the ship was not allowed to discharge as fast as she could from the hatches used, the charterers did not exceed, therefore, the time at their disposal under the charter.

The extra expense caused by working the ship at night amounted to $139.70. Such extra expense, by the terms of the charter, was to be charged to the charterer. The later, however, contends that it was chargeable to him only in case night work was required by him; and that such night work was not done upon the requirement of the charterer, but because the ship demanded it, and was asented to on the condition that the ship should pay the extra expense. Language to that effect appears in a letter to the respondents in answer to the ship's claim for a quicker discharge and in reply thereto. The discharge at night, however, was as much for the benefit of the charterer as for the ship. In the demurrage account the charterers are given the benefit of the night work, which has saved them about $434, which they would otherwise have been liable to pay the ship for demurrage. This night work was "required" by them in order to avoid the amount of demurrage. Under such circumstances it is the plain intent of the charter that the charterer should pay the extra expense of night work. It is like a substituted expense. Wheelright vs. Welsh, 44 Fed. Rep. 380. The libellant is, therefore, entitled to a decree for that amount, together with towage to the two different berths amounting to $35; in all $174.70, with interest. The libellant not being successful on the principal item of the claim. namely: $1358 for demurrage, no costs are allowed.

April 26, 1892.

NOTES.

The Lackawanna Lubricating Co., Scranton, Pa., have just issued their No. 2 catalogue containing cuts and directions for using their lubricators. A long list of prominent firms using the Lackawanna cylinder lubricators and grease cups, besides testimonials from extensive machine works fully bear out the claims of the manufacturers in their specialties. The Lackawanna cylinder lubricators, grease cups and compound for using with same are guaranteed and the company desire the most critical tests which can be brought before them.

Dr. Nansen, whose plan for seeking the North Pole is to jab into the drifting ice in a stout vessel and resign himself to certain ocean currents, proposes to lay in a four years' supply of provisions when he finally embarks on this voyage. He will also take along an immense stock of patience.

A wreck and salvage district has been established on the Georgian Bay side of the peninsula extending from Tobermoray to Wiarton and Capt. Jas. Crawford has been appointed salvage officer for it. This is a convenience to those doing shipping and rafting in those waters as much wreckage and broken rafts go ashore there and are picked up by beach-combers, consequently are lost to the owners. This will now be obviated.

The advantages of having telegraphic communication between lighthouses, lightships, and the shore, are so many and so obvious that there is no very good reason to be advanced why it should not be made without delay. It is simply making the danger signals along the coast fully effective. Congress should make provision for this work, which is partly done through the coast telegraph lines already owned by the National Government. The Life-Saving Service stations should also be included in this telegraphic communication service. That it will be done is certain. The sooner it is accomplished the better for the safe navigation of our coasts. —*The New York Maritime Register.*

MORE OUTSPOKEN THAN DISCREET.

Rev. T. G. Milsted, pastor of the Unity Church, Chicago, has for some time past entertained the idea of erecting a bethel for the sailors which frequent that port. Last Sunday morning he made the matter a subject of earnest appeal to the members of his congregation. He dwelt at length upon the great need of such an institution in Chicago and said: "We must do something to save these men. They have now no place to go, but to the dives and saloons. What wonder that they are so disreputable." "You're a liar," yelled a voice in the back of the church. "I'm a sailor," yelled the owner of the voice, and we are not disreputable; we don't want any bethel home. What we want is more wages," and the toiler of the seas delivered to the congregation his personal opinion of the pastor, which was neither flattering nor couched in polite language. All efforts to pacify him failed, and the profane argumentative son of Neptune was hustled through the sacred portals by an array of ushers.

PROPOSALS.

U. S. ENGINEER OFFICE, HICKOX Building, 185 Euclid Avenue, Cleveland, Ohio, September 20, 1892. Sealed proposals for dredging in straight channel, through Maumee Bay, for Toledo Harbor, Ohio, will be received at this office until 2 o'clock p. m., of Saturdsy, October 15, 1892, and then publicly opened. Specifications, blank forms, and all available information will be furnished on application to this office. JARED A. SMITH, Lieut. Col., Corps of Engineers, U. S. A. 3t

UNITED STATES ENGINEER OFfice, 34 West Congress street, Detroit, Mich., September 8, 1892. Sealed proposals for furnishing by the hour 1 dredge, 1 tug, and 2 dump scows, for use at Detroit River, Mich., will be received at this office until 2 p. m October 8, 1892, and then publicly opened. Specifications, blank forms, and all available information will be furnished on application to this office. O. M. POE, Colonel, Corps of Engineers, etc. 9-15-10-6

TREASURY DEPARTMENT, WASHington, D. C., September 3, 1892. Sealed proposals for constructing a steam propeller, to be named Wm. Windom, for the United States Revenue Cutter Service, will be received at this department until 2 o'clock p. m. Wednesday, October 5, 1892. Bids must be in accordance with the instructions on page 5 of the specifications, and be addressed to the Secretary of the Treasury, and indorsed on the envelope, "Proposals for construction of steam propellers for United States Revenue Cutter Service." Specifications for the work will be furnished to parties desiring to submit bids upon application to this department. The right is reserved to reject any or all bids, and to waive defects, if deemed for the interest of the government so to do. CHARLES FOSTER, Secretary.